

What is claimed is:

1           1. A method for providing a crypto key and an  
2 associated checkword of said crypto key to an encryption  
3 device for a telemeter system of a missile, said method  
4 comprising the steps of:

5           (a) generating said crypto key and said associated  
6 checkword;

7           (b) transferring said crypto key and said associated  
8 check word to a microcontroller having a memory for a  
9 duplication and a storage of said crypto key and said  
10 associated check word within said memory;

11           (c) duplicating said crypto key and said associated  
12 check word within said microcontroller to provide a  
13 duplicate of said crypto key and a duplicate of said  
14 associated check word;

15           (d) storing said crypto key, said associated check  
16 word, the duplicate of said crypto key and the  
17 duplicate of said associated check word in the memory  
18 of said microcontroller;

19           (e) loading said crypto key and said associated check  
20 word from the memory of said microcontroller into said  
21 encryption device; and

22           (f) erasing said crypto key and said associated check  
23 word from the memory of said microcontroller upon a

24 launch of said missile to prevent an enemy force from  
25 retrieving said crypto key and said associated check  
26 word from the missile after the launch of said missile.

1 2. The method of claim 1 comprising the additional  
2 step of loading the duplicate of said crypto key and the  
3 duplicate of check word into said encryption device when  
4 said encryption device rejects said crypto key.

1 3. The method of claim 1 comprising the additional  
2 step of indicating a status of a store of said crypto key  
3 and said associated check word into the memory of said  
4 microcontroller.

1 4. The method of claim 3 wherein said the status of  
2 the store of said crypto key and said associated check word  
3 into the memory of said microcontroller is indicated by a  
4 light emitting diode connected to said microcontroller.

1 5. The method of claim 1 comprising the additional  
2 step of indicating a status of an erase of said crypto key  
3 and said associated check word from the memory of said  
4 microcontroller.

1           6. The method of claim 5 wherein said the status of  
2 the erase of said crypto key and said associated check word  
3 from the memory of said microcontroller is indicated by a  
4 light emitting diode connected to said microcontroller.

1           7. The method of claim 1 wherein a key loader  
2 connected to said microcontroller generates said crypto key  
3 and said associated check word and transfers said crypto key  
4 and said associated checkword to said microcontroller.

1           8. The method of claim 1 wherein said microcontroller  
2 comprises an eight bit microcontroller having an  
3 electrically erasable programmable read only memory adapted  
4 for storing said crypto key, said associated check  
5 word, the duplicate of said crypto key and the duplicate of  
6 said associated check word.

1           9. The method of claim 1 wherein said encryption unit  
2 comprises a KGV-68 encryption unit.

1           10. The method of claim 1 comprising the additional  
2 step of:

3           (a) turning off a transmitter connected to said  
4 microcontroller when the transfer of said crypto key

5 and said associated check word to said microcontroller  
6 occurs to prevent a transmission of said crypto key and  
7 said associated check word by said transmitter; and  
8 (b) turning on said transmitter after the storage of  
9 said crypto key and said associated check word within  
10 the memory of said microcontroller.

1 11. The method of claim 1 comprising the additional  
2 steps of:

3 (a) turning off a transmitter connected to said  
4 microcontroller before a load of said crypto key and  
5 said associated check word into said encryption device  
6 occurs to prevent a transmission of said crypto key and  
7 said associated check word by said transmitter; and  
8 (b) turning on said transmitter after the load of said  
9 crypto key and said associated check word into said  
10 encryption device.

1 12. A method for providing a crypto key and an  
2 associated checkword of said crypto key to an encryption  
3 device for a telemeter system of a missile, said method  
4 comprising the steps of:

5 (a) generating said crypto key and said associated  
6 checkword;

7 (b) transferring said crypto key and said associated  
8 check word to a microcontroller having a memory for a  
9 duplication and a storage of said crypto key and said  
10 associated check word within said memory;  
11 (c) disabling a transmitter connected to said  
12 microcontroller when the transfer of said crypto key  
13 and said associated check word to said microcontroller  
14 occurs to prevent a transmission of said crypto key and  
15 said associated check word by said transmitter;  
16 (d) duplicating said crypto key and said associated  
17 check word within said microcontroller to provide a  
18 duplicate of said crypto key and a duplicate of said  
19 associated check word;  
20 (e) storing said crypto key, said associated check  
21 word, the duplicate of said crypto key and the  
22 duplicate of said associated check word in the memory  
23 of said microcontroller;  
24 (f) enabling said transmitter after the storage of  
25 said crypto key and said associated check word within  
26 the memory of said microcontroller;  
27 (g) disabling said transmitter prior to a load of said  
28 crypto key and said associated check word into said  
29 encryption device;  
30 (h) loading said crypto key and said associated check

31 word from the memory of said microcontroller into said  
32 encryption device;

33 (i) enabling said transmitter after the load of said  
34 crypto key and said associated check word into said  
35 encryption device; and

36 (j) erasing said crypto key and said associated check  
37 word from the memory of said encryption device upon a  
38 launch of said missile to prevent an enemy force from  
39 retrieving said crypto key and said associated check  
40 word from the missile after the launch of said missile.

1 13. The method of claim 12 comprising the additional  
2 step of loading the duplicate of said crypto key and the  
3 duplicate of check word into said encryption device when  
4 said encryption device rejects said crypto key.

1 14. The method of claim 12 comprising the additional  
2 step of indicating a status of a store of said crypto key  
3 and said associated check word into the memory of said  
4 microcontroller.

1 15. The method of claim 14 wherein said the status of  
2 the store of said crypto key and said associated check word  
3 into the memory of said microcontroller is indicated by a

4 light emitting diode connected to said microcontroller.

1 16. The method of claim 12 comprising the additional  
2 step of indicating a status of an erase of said crypto key  
3 and said associated check word from the memory of said  
4 microcontroller.

1 17. The method of claim 16 wherein said the status of  
2 the erase of said crypto key and said associated check word  
3 from the memory of said microcontroller is indicated by a  
4 light emitting diode connected to said microcontroller.

1 18. The method of claim 12 wherein a key loader  
2 connected to said microcontroller generates said crypto key  
3 and said associated check word and transfers said crypto key  
4 and said associated checkword to said microcontroller.

1 19. The method of claim 12 wherein said  
2 microcontroller comprises an eight bit microcontroller  
3 having an electrically erasable programmable read only  
4 memory adapted for storing said crypto key, said associated  
5 check word, the duplicate of said crypto key and the  
6 duplicate of said associated check word.

1           20. The method of claim 12 wherein said encryption  
2           unit comprises a KGV-68 encryption unit.